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UNITED STATES DEPARTMENT OF AGRICULTURE

Bureau of Agricultural Economics

Agricultural Economics Bibliography No. 58

PRICE STUDIES OF THE U. S. DEPARTMENT OF AGRICULTURE
SHOWING DEMAND-PRICE, SUPPLY-PRICE, AND PRICE-PRODUCTION RELATIONSHIPS

Compiled by Louise O. Bercaw
Under the direction of Mary G. Lacy, Librarian
Bureau of Agricultural Economics

Washington, D. C.
October, 1935

PRICE STUDIES OF THE U. S. DEPARTMENT OF AGRICULTURE
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DEMAND-PRICE RELATIONSHIPS

Bean, L. H. Applications of a simplified method of graphic curvilinear correlation. A preliminary report. 2 pts., mimeogr., charts. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1929.

The following is quoted from p. 1:

"The purpose of this paper is to present this simple approach to multiple curvilinear correlation. The method employed will be demonstrated with six examples, or cases, of actual problems chosen from different fields of economic relationships, in the hope that this 'case' method of presentation will not only make clear the simple steps involved, but will also suggest their application to similar problems likely to be encountered by the analyst of variations in economic data. It will be demonstrated by means of a generalized problem, but in this final illustration also we shall refrain from generalization. Technical language will be used as little as possible, but the reader will need to study closely the graphic presentations, for the method is essentially one of graphic correlation. In each example the data used and the steps in the analysis will be so indicated that the reader may properly appraise the reasonableness of the approach and the reliability of the results. The assumptions and logic involved in each of the six special cases will also be indicated but this only briefly." Titles of each of these cases follow:

Case I, pp.2-4: Relation of (1) production of early potatoes and (2) the price of old potatoes to (3) the price received by producers of early potatoes.

Case II, pp.4-5: Relation of cotton prices and business conditions to the domestic mill consumption of cotton.

Case III, pp.5-7: Cotton consumption (continued).

Case IV, pp.7-8: Effect of supply and other factors on the yearly average of farm price of apples.

Case V, pp.8-9: Effect of supply and other factors on the New York price of California oranges.

Case VI, pp.9-10: Effect of price on acreage of cotton harvested in the United States.

Part II is entitled The Method Applied to Changes in Acreages,

*Attention should be called to the fact that items have been repeated in some cases in the three different sections of the bibliography. This makes it appear on first sight that there have been more price studies made by the Department than have actually been made.

Yields and Livestock Numbers. Three examples, or cases, are given. Case VIII, pp.1-2: The relation of price to changes in the United States acreage of cabbage. Case IX, pp.3-4: The relation of price to changes in the number of hogs on farms in the United States on January 1.

Bean, L. H. Characteristics of agricultural supply and demand curves. 6pp., 11pp. charts, mimeogr. [Washington, D. C.] U. S. Dept. of Agriculture, Bureau of Agricultural Economics [1933] 1.9 Ec752Cha

This is a summary of an address before Section K of the American Association for the Advancement of Science, in a joint program with the Econometric Society, Syracuse, N. Y., June 22, 1932.

The following is quoted from the writer's introductory paragraphs:

"This paper attempts to bring together a number of studies, made by the writer during the past three or four years, which have been of practical use in anticipating changes in prices, marketings, and subsequent farm production. They are an outgrowth of the price analysis work sponsored by the Bureau of Agricultural Economics in its attempts to supply farmers with outlook information relative to prospective changes in supply and demand conditions. The topics covered...are (1) a simple illustration of an approach to the instantaneous supply and demand curves for commodities of fixed annual supply. The supply curves dealt with...are the current-supply curves representing supplies offered from a total fixed available quantity on hand, (2) relations between producer, dealer and total demand curves and two views of price determination, (3) shifts in demand curves, that involve changes in slope (of elasticity) and changes in level due to the value of money, population growth, etc., (4) comparison of agricultural with nonagricultural demand curves, and (5) subsequent-supply curves, which show the effect of current supplies of the following season or seasons. The method of analysis used...is the simplified graphic approach to multiple curvilinear correlation described by the writer in the Journal of the American Statistical Association in December, 1929, and December, 1930." Commodities for which curves are given are potatoes, pig iron and steel, meat animals, and hogs.

Bean, L. H. Factors affecting the yearly average price of cranberries. U. S. Dept. Agr., Bur. Agr. Econ., Agr. Situation 12(8): 17-18, charts. Aug. 1928. 1 Ec7Ag

Accompanied by a chart in three sections, the supply-price curve, deviation from supply-price curve, and actual and estimated yearly average price.

"An analysis of the f.o.b. shipping point prices of cranberries as reported by the American Cranberry Exchange, which handles nearly two-thirds of the crop, indicates that the yearly average price is very largely determined by the size of the United States crop. The size of the United States crop, together with two other factors, namely, the year-to-year variations in the general commodity price level and an annual growth in demand, almost completely determine the yearly f.o.b. price of cranberries."

Bean, L. H. Factors related to production, prices, and acreage of potatoes in Maine. 5pp., 5pp. charts, 3pp. tables, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1931. 1.9 Ec752Fp

"Abstract of address given at county agent meetings, Maine Agricultural College, Orono, Maine, February 5, 1931."

"The purpose of this address was to bring together some of the outstanding facts concerning the fluctuations in acreage, yield, production, and prices of Maine potatoes and to derive from them certain relations that might be helpful in judging probable supply and price conditions for the 1931 season.

"The main conclusions that may be drawn from these facts bearing on 1931 prospects are: (1) the price that is likely to prevail at Presque Isle, Maine for the 1931 crop will be determined very largely by national supply and demand conditions and partly by the production in the Northeastern States. (2) the national supply in 1931 is likely to be larger than in 1930 because the relatively high prices received for the 1929 and 1930 crops were sufficient to induce a general acreage expansion and because normal weather conditions in 1931 would result in an average yield for the country as a whole higher than the abnormally low yields of 1929 and 1930. (3) similar indications point to a larger supply in the Northeast, New England, New York and New Jersey. (4) the 1930-31 business depression has gone so far below normal that a very marked improvement in consumer purchasing power is unlikely by the time the Maine crop begins to be marketed and (5) the larger national supply together with a larger local supply in prospect will more than offset any moderate advance in consumer demand with the result that the level of prices in Maine in the fall and winter of 1931-32 is likely to be lower than in 1930-31."

Bean, L. H. Factors related to the yearly United States average farm price of potatoes, 1920-1931. Potato World 1(3): 1-4. Apr. 1932. 286.83 P84

Contains four charts which "are intended to show in simple and compact form, 1. The yearly changes in the level of potato prices for the period 1920-1931 as represented by the United States average farm price. 2. The yearly changes in total United States acreage and average yield per acre; 3. How potato prices would respond to production if business conditions and general food prices remained stable. 4. Variations in potato prices, due to factors other than the size of the crop."

Bean, L. H. Helping the farmer to make his plans. Interrelationships between supply, price, and consumption. Commercial. American cotton annual review, Aug. 30, 1928, pp.17-18, charts. folio 72.9 M313.

Presents some of the results of the Bureau of Agricultural Economics' cotton price analysis studies.

Bean, L. H. A simplified method of graphic curvilinear correlation. Jour. Amer. Statis. Assoc. 24(n.s.168): 386-397. Dec. 1929.

In chart IV, p.395 "is an analysis of the price of early potatoes received by growers, showing the effect of production of early potatoes and of the competitive effect of the price of old potatoes for the years 1921-1928 inclusive."

In chart V, p.396 "is an analysis of the effect of price and business activity on the domestic mill consumption of cotton for the years 1919 to 1928, inclusive."

A further application of this method by Mr. Bean is given in Application of a Simplified Method of Correlation to Problems in Acreage and Yield Variations in Jour. Amer. Statis. Assoc. 25(n.s.172): 428-439. Dec. 1930.

Bean, L. H. Some interrelations between the supply, price and consumption of cotton. 8pp., 7pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1928. 1.9 Ec752Sc

"Address delivered before the American Statistical Association, New York City, Friday, April 20, 1928."

The purpose of this paper is to present a few of the results of price studies made by the Bureau of Agricultural Economics in relation to cotton.

The effect of supply on price, pp.2-4; The effect of price on supply, p.5; The effect of consumption on price, pp.5-6; The effect of price on consumption, pp.6-7.

Bean, L. H., and Thorne, G. B. The use of "trends in residuals" in constructing demand curves. Amer. Statis. Assoc. Jour. 27(177): 61-67. Mar. 1932.

Buechel, F. A., and Kedzierski, S. L. Analysis of the price-making forces in the New York egg market. A preliminary report. 69pp., mimeogr., charts. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, April 1932. 1.9 Ec724Ane

List of references consulted, p. 69.

An analysis of the supply, demand, and other factors bearing on the variations in the prices of Pacific Coast white extras on the New York market.

Campbell, C. E. Canned vegetable prices. 15pp., 4pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Jan. 1933. 1.9 Ec752Cv

"The following price-influencing factors were analyzed in this study: (1) pack, (2) carry-over, (3) consumer purchasing power, (4) imports, both fresh and canned, (5) competing supplies of fresh vegetables, (6) home canning, (7) competition in the case of each commodity from other canned vegetables, and (8) influence of the price level of all canned vegetables as a group on the fluctuations in price of each of the commodities."

Conway, H. M. Factors affecting fed cattle prices. U. S. Dept. Agr., Bur. Agr. Econ., Agr. Situation 11(12): 16-17. Dec. 1927.

"In studying the accompanying chart which indicates the principal factors causing variations in prices of fed cattle, it is essential to know that the upward trend in cattle prices and the high prices during the World War were largely caused by the declining value of the dollar, or, in other words, were the result of the higher general price level for all commodities....

"Market supplies largely control the season-to-season variations in prices. The total number of fed cattle marketed is the most important factor. The effect of this on the long-time variations in prices is also particularly significant but is obscured almost entirely by the fluctuations caused by the general price level. Second in importance is the proportion of the better grades of fed cattle in the market supply, or the general character of the supply, especially as to the degree of fatness. The price of corn largely governs the degree to which cattle are finished....

"Demand factors are rather numerous but as a whole cause less direct variation in prices than the supply factor..." Among the demand factors mentioned are competitive effect of pork price on the demand for beef, industrial activity, export demand, increased population, and current demand for feeding cattle. Hide prices have some influence on the lower grades of cattle.

Cox, A. B. Cotton prices and markets. U. S. Dept. Agr. Bull. 1444. 78pp. Washington, D. C., 1926.

"An understanding of the marketing of cotton involves a knowledge of the demand for cotton, the supply of it, the machinery developed to bring demand and supply into trading relations, and the historical development of these three market factors. This analysis of the fundamental factors involved in cotton price making and this description of the markets in which prices are made is a contribution to that understanding." -p.1.

Elliott, F. F. Adjusting hog production to market demand. Ill. Agr. Expt. Sta. Bull. 293, pp.503-567, charts. Urbana, 1927.

"This bulletin, prepared in cooperation with the U. S. D. A. Bureau of Agricultural Economics, includes a discussion of why hog prices fluctuate, based largely on the statistical analysis of hog prices in U.S.D.A. Bulletin 1440...; the results of statistical studies of the causes of the fluctuations in the supply of hogs and of the response of hog producers in different sections of Illinois to the corn-hog ratio; and a discussion of the practices of the majority of farmers, what certain successful farmers are doing to adjust their hog production to market demand, and of the possibilities of smoothing out the hog-price cycle..." -Expt. Sta. Rec. 57: 685. 1927.

The following is quoted from p.513:

"Supply of hogs (includes storage holdings) is the most important

single factor in determining the price of hogs. Increases in population and changes in the value of money are next in importance, followed by foreign demand for pork products, the price of substitute commodities, and general business conditions."

Ezekiel, Mordecai. Two methods of forecasting hog prices. Amer. Statis. Assoc. Jour. 22(n.s.157): 22-30. Mar. 1927. 251Am3

"Charts are given and discussed showing estimates (computations made after the event) from July 1924 to June 1925 and forecasts (computed before the event) from July 1925 to May 1927, using the pre-war formula and 'synthetic demand-curve' method..." -Expt. Sta. Rec. 57: 85. 1927.

Haas, G. C., and Ezekiel, Mordecai. Factors affecting the price of hogs. U. S. Dept. Agr. Bull. 1440, 68pp. Washington, D. C., 1926.

"The dominant influences in the hog market, as shown by this study, are (1) the supply of hogs on the market and expected to arrive on the market within the next few months, (2) the quantity of hog products in storage, (3) the general price level, (4) general business conditions, and (5) the prices of alternative products. The general levels of demand, both here and abroad, are both important, but ordinarily change only slowly." -p.53.

Hedden, W. P., and Cherniack, Nathan. Measuring the melon market. A preliminary report. 24pp., charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, April 1924. 1.9 Ec7Mn

Issued in cooperation with the Port of New York Authority.

"Prices of watermelons are determined almost entirely by the supply, at the present time, largely because supply is continually in excess of demand...Sales of watermelons, on the other hand, are related closely to demand even at the present time." -pp.15-16.

Kantor, H. S. Factors affecting the price of peaches in the New York City market. U. S. Dept. Agr., Tech. Bull. 115, 64pp., charts. Washington, D. C., 1929.

Contains the two following paragraphs on the influence of demand on prices:

"Besides responding to the supply, it is probable that peach prices are affected by changes in demand. Such changes in demand may be due to changes in the supplies or in the prices of competitive fruits...; changes in climatic conditions... and changes in business conditions, with resulting differences in consumers' ability to buy.

"Although these demand factors would undoubtedly have some influence upon peach prices, it is evident that they are much less important than are supply changes. It is not yet known how far such competitive products or other demand factors affect peach prices; further studies are needed before positive conclusions can be reached."

Myers, Lawrence. Fertilizer consumption in cotton area varies with return from crop. U. S. Dept. Agr. Yearbook of Agriculture, 1928, pp.292-293. 1929.

"The effects of fertilizer prices, cotton prices and the preceding cotton acreage and yield on fertilizer consumption in the cotton area are shown." -Wells, O. V. Farmers' response to price; a selected bibliography, item 44.

Ross, H. A. Some factors affecting the demand for milk and cream in the metropolitan area of New York. U. S. Dept. Agr. Tech. Bull. 73, 68pp., charts. Washington, D. C., 1928.

This bulletin, with the exception of minor changes, is the same as N. Y. Cornell Agr. Expt. Sta. Bull. 459, The Demand Side of the New York Milk Market, by H. A. Ross.

This study has four principal aims as outlined on p.2 of the bulletin:

"1. To determine the factors which affect demand and to measure their influence. 2. To determine the quantities of different products demanded throughout the year, so that production may be intelligently adjusted. 3. To formulate a method of forecasting sales of milk and cream in order to decrease the surplus necessary to guard against shortages due to unexpected fluctuations in demand. 4. To quantitatively analyze demand as a factor in milk prices [see paragraph on p.54]."

Smith, B. B. Factors affecting the price of cotton. U. S. Dept. Agr., Tech. Bull. 50, 75pp., charts. Washington, D. C., 1928.

Literature cited, pp.72-74.

Effect of size of supply on price and value of crop, pp.3-7; Factors affecting changes in cotton acreage, pp.7-9; Factors influencing monthly prices of cotton (influence of supply upon prices, influence of demand upon prices, influence of purchasing power of consumers, relative importance of supply and demand factors in cotton price fluctuations), pp.9-18; Statistical analysis of factors influencing cotton prices, pp.18-56.

Stine, O. C. Price analysis as a basis for effective marketing programs. Natl. Assoc. Marketing Officials. Proc. 10(1928): 59-65.

Stine, O. C. A program for the improvement and elaboration of data needed for commodity price forecasting. Jour. Farm Econ. 12(1): 107-118. Jan. 1930.

"Enough is known about prices to enable competent analysts to make price forecasts sufficiently accurate to be useful in planning production, marketing, consumption, or buying to the advantage of the producer, the distributor, or the consumer. Whenever it is possible by such means to bring about a more accurate adjustment of prices to fundamental supply and demand conditions, the producer, the distributor and the consumer may all profit through the elimination of economic wastes. These two propositions are rephrased from

the conclusion of the paper read last year at the meeting of the Farm Economic Association on 'Progress in Price Analysis and an Appraisal of Success in Price Forecasting.' I am restating these two propositions as my justification for advocating great care and large expenditures in the collection and analysis of data as to production, prices, and consumption of commodities, for use in price forecasting." -p.107.

Stine, O. C. Progress in price analysis and an appraisal of success in price forecasting. Jour. Farm Econ. 11(1): 128-140. Jan. 1929.

Strowbridge, J. W. Origin, distribution and market price of the commercial watermelon crop. U. S. Dept. Agr., Tech. Bull. 398, 60pp., charts. Washington, D. C., 1933.

Supply and price, pp.42-58.

The following is quoted from p. 59:

"Consumer demand, quality, volume of supply, use of competitive fruits, and weather conditions in the producing areas and in the consuming centers are among the factors advanced by the trade as reasons for the changing prices of watermelons. Any one or all of these factors may affect watermelon prices provided their influence is sustained for a continued period of time, but the day-to-day changes in price that occur are not easily explained."

Thorne, G. B., and Richards, Preston. Factors affecting exports of United States hog products. 5lpp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, Nov. 1932. 1.9 Ec752Fh
Selected references, pp.50-51.

U. S. Dept. of agriculture, Bureau of agricultural economics. The direct marketing of hogs. U. S. Dept. Agr. Misc. Pub. 222, 230pp. Washington, D. C., 1935.

See particularly pp.13-16 and chapter 7, Factors Affecting Hog Prices, and chapter 8, Competition for Hogs.

"The chief factors causing hog prices to change in this country during the last 20 years have been: (1) Changes in the buying power of domestic consumers, (2) variations in hog production, (3) changes in the charges for processing and distribution, and (4) changes in foreign demand for American hog products. Statistical evidence indicates that changes in hog prices in recent years have been due to causes other than changes in marketing methods including the rapid growth of direct marketing." -p.13.

U. S. Dept. of agriculture, Bureau of agricultural economics. Discussion of price forecasting at a conference with state representatives. Annual outlook meetings of the Bureau of agricultural economics, January 26, 1928. 14pp., 15pp. charts, mimeogr. Washington, D. C., 1928. 1.9 Ec7AgrD

Contents: Can prices be forecasted? abstract of discussion by O. C. Stine, pp.1-4; Price forecasting, abstract of discussion by M. J. B.

Ezekiel, pp.5-8; Factors affecting the price of corn, abstract of discussion by C. M. Purves, p.9; Price forecasting, abstract of discussion by L. H. Bean, pp.10-14.

U. S. Dept. of agriculture, Bureau of agricultural economics. Economic situation of hog producers. Letter from the Secretary of agriculture transmitting in response to Senate resolution No. 281, a report pertaining to the hog situation and the probable effects of the proposed export debenture, equalization fee, and domestic allotment plans for farm relief, on the economic position of hog producers. U. S. 72d Cong., 2d sess., Senate Doc. 184, 87pp. Washington, D. C., U. S. Govt. print. off. 1933. 1 Ec7Ec

How hog prices are determined, pp.14-17; Domestic demand for hog products, pp.17-22; The foreign outlet for United States hog products, pp.22-29.

For effects of various plans on prices see pp. 46, 51, 57, etc.

U. S. Dept. of agriculture, Bureau of agricultural economics. The outlook for the dairy industry. U. S. Dept. Agr., Misc. Pub. 124, 60pp. Washington, D. C. 1931.

Effect of consumers' incomes on prices, p.19; Effect of incomes on expenditures for dairy products, pp.24-26; Effect of prices and incomes on consumption, pp.26-27; Foreign competition and demand, pp.27-35; Readjustments in the dairy industry in the United States, pp.35-52; Conditions affecting the demand for dairy products, pp.52-57.

U. S. Dept. of agriculture, Bureau of agricultural economics. The world cotton situation, with outlook, 1931-32, and the long-time outlook for southern agriculture. U. S. Dept. Agr., Misc. Pub. 104, 76pp. Washington, D. C., 1930.

"See pp.25-37 for a non-technical discussion of changes in cotton acreage and production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 23. See also for effect of supply and demand on price.

U. S. Dept. of agriculture, Bureau of agricultural economics. The world wheat outlook, 1930 and facts that farmers should consider. U. S. Dept. Agr. Misc. Pub. 95, 40pp., charts. Washington, D. C., 1930.

World supply and price, pp.8-13; the effect of changes in production upon prices, pp.32-33. See also for influence of demand on price.

U. S. Dept. of agriculture, Bureau of agricultural economics. World trade barriers in relation to American agriculture. Letter from the Secretary of agriculture transmitting in response to Senate resolution No. 280, seventy-second Congress, first session, submitted by Senator Norbeck, a report pertaining to restrictions upon international trade in major agricultural products throughout the world, measures undertaken in several countries to protect the position of their farm producers, and the effects of these restrictions and measures upon prices of farm products and the welfare of American farmers. U. S. 73d Cong., 1st sess., Senate Doc. 70, 540pp. Washington, D. C., 1933.

Waite, W. C., and Sturges, Alexander. On certain mathematical properties of demand curves of constant elasticity. Jour. Farm Econ. 12(1): 181-182. Jan. 1930.

Working, E. J. Evaluation of methods used in commodity price forecasting. Jour. Farm Econ. 12(1): 119-138. Jan. 1930.

Working, E. J. Indications of changes in the demand for agricultural products. Jour. Farm Econ. 14(2): 239-256. Apr. 1932. 280.8 J822
Discussion by W. Leontief.

"Statistical analyses properly carried out can in the case of many commodities be made to yield an approximation of some sort of short-time normal demand curve (demand used in the schedule sense). It should not be assumed that long-time normal demand curves may be approximated with similar success. By graphic methods relationships can be developed which are close enough and sufficiently in accord with theoretical reasonableness to justify using them as indications of the relative importance of changes in demand and changes in price in affecting the yearly rate of consumption." -Social Sci. Abs., v. 4, Oct. 1932, item 16980.

Working, E. J. Production and demand: contrasts between agriculture and other industries. Chapter XI, pp.160-191, graphs.

Reprinted from Stabilization of Employment: a symposium held under the auspices of the American Association for the Advancement of Science ed. by C. F. Roos, Bloomington, Ind., Principia press, inc., 1933. (283 R67)

The writer discusses "the comparative stability of employment in agriculture and other industries as it relates to other business cycle factors, especially as it relates to demand." The chapter is in eleven parts: introduction, stability of agricultural employment and production, the cost of employment stability to agriculture, influence of supply and demand on prices, effects of combating falling prices by curtailing production, a depression is a spasm of underproduction, need falling prices cause under-production, control of production versus free competition, international causes of changing price levels, reaction of the price level to production curtailment, conclusion.

Working, E. J. Statistical demand curves. Encyclopedia of the Social Sciences, v. 5, pp.72-75. 1931. 280 En1

A list of references accompanies the article.

SUPPLY-EFFECT ON PRICE

Bean, L. H. Applications of a simplified method of graphic curvilinear correlation. A preliminary report. 2 pts., mimeogr., charts. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1929. 1.9 Ec752Ap

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Bean, L. H. Factors bearing on the price of apples. U. S. Dept. Agr., Bur. Agr. Econ., Agr. Situation 13(11): 10-13, chart. Nov. 1929. 1 Ec7Ag

Mainly on the relation of supply to price.

Bean, L. H. Factors related to acreage, production, and prices of potatoes in Florida. 10pp., 9 pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1931. 1.9 Ec762Fp

"Summary of outlook talks presented to growers in La Crosse and Hastings, Florida, November, 1931."

The following is quoted from pp. 1-2:

"The facts contained in the following statement bear on the 1931 potato situation in relation to the prospects for production, demand, and prices for the 1932 Florida potato crop. They indicate that:

"The low prices received by Florida growers in 1931 resulted largely from a record supply of early potatoes available during the months of March, April, and May... The supply of early potatoes in Florida and other States that market during the Florida season - March, April, and May will of course depend on the acreages planted

in 1931-32 and on the yields per acre obtained... The acreages to be planted in Florida and in the other Gulf States will be influenced as they have been in the past by such factors as the prices received for the 1931 crop, the credit conditions prevailing in these several areas, and the price situations this winter and at planting time that will prevail in the northern potato markets. Prices as low as those received in 1931 in Florida and in the other Southern early producing States have in the past tended toward acreage reductions. The supply of late crop potatoes in the Northern States held over from the 1931 crop and marketed after March in competition with the 1932 early crop is considerably greater than that available in the spring of 1931... But in addition to this increased supply, the very low prices that have prevailed at the Northern shipping points have restricted current shipments and a larger proportion of a larger crop is now available in competition with the 1932 early potato crop...

"The marketing of next March, April, and May face this greatly reduced consumer demand [referred to in omitted section] in which there is usually no noticeable improvement for several months after business activity has stopped declining.

"The level of potato prices in Florida next spring will depend on the course of prices in the Northern markets this winter and on the supply of early potatoes produced in 1932...

"Obviously in view of the low level of the potato markets this season because of the industrial depression and ample supplies of old potatoes Florida growers can hardly anticipate the prices received for the 1931 crop if only a moderate reduction in the supply of early potatoes takes place."

Bean, L. H. Factors related to production, prices, and acreage of potatoes in Maine. 5pp., 5pp. charts, 3pp. tables, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1931. 1.9 Ec752Fp

"Abstract of address given at county agent meetings, Maine Agricultural College, Orono, Maine, February 5, 1931."

"The purpose of this address was to bring together some of the outstanding facts concerning the fluctuations in acreage, yield, production, and prices of Maine potatoes and to derive from them certain relations that might be helpful in judging probable supply and price conditions for the 1931 season.

"The main conclusions that may be drawn from these facts bearing on 1931 prospects are: (1) the price that is likely to prevail at Presque Isle, Maine for the 1931 crop will be determined very largely by national supply and demand conditions and partly by the production in the Northeastern States, (2) the national supply in 1931 is likely to be larger than in 1930 because the relatively high prices received for the 1929 and 1930 crops were sufficient to induce a general acreage expansion and because normal weather conditions in 1931 would result in an average yield for the country as a whole higher than the abnormally low yields of 1929 and 1930. (3) similar indications point to a larger supply in the Northeast, New England, New York and New Jersey. (4) the 1930-31 business depression has gone so

far below normal that a very marked improvement in consumer purchasing power is unlikely by the time the Maine crop begins to be marketed and (5) the larger national supply together with a larger local supply in prospect will more than offset any moderate advance in consumer demand with the result that the level of prices in Maine in the fall and winter of 1931-32 is likely to be lower than in 1930-31."

Bean, L. H. Factors related to the yearly United States average farm price of potatoes, 1920-1931. Potato World 1(3): 1-4. Apr. 1932. 286.83 P84

Contains four charts which "are intended to show in simple and compact form, 1. The yearly changes in the level of potato prices for the period 1920-1931 as represented by the United States average farm price. 2. The yearly changes in total United States acreage and average yield per acre. 3. How potato prices would respond to production if business conditions and general food prices remained stable. 4. Variations in potato prices, due to factors other than the size of the crop."

Bean, L. H. Helping the farmer to make his plans. Interrelationships between supply, price, and consumption. Commercial. American cotton. Annual review, Aug. 30, 1928, pp.17-18, charts. folio 72.9 M313

Presents some of the results of the Bureau of Agricultural Economics' cotton price analysis studies.

Bean, L. H. Major and minor hog-price cycles. U. S. Dept. Agr., Bur. Agr. Econ. Agr. Situation 12(7): 16-19, chart. July 1926.

The following is quoted from the next to the last paragraph of the article:

"Two questions suggest themselves: What is the reason for this regular alternating sequence of major and minor hog price cycles and what is their practical significance? The major price cycles appear to have accompanied seasons of considerable reduction in the number of hogs slaughtered, and the minor ones appear to have accompanied moderate reductions in slaughter, and these in turn reflect the corn supply situation. For example, the period 1920-24 was one of large corn crops, heavy slaughter, and a minor hog price cycle, and the next period, 1924-28, one of smaller corn crops, light slaughter and a major price cycle. Consequently, the basic explanation of the major and minor price fluctuations is probably traceable to the corn supply and to the tendency for periods of large corn crops to alternate with periods of small crops. From this it would seem that the usual response of farmers to very low prices, namely, curtailment of output, has been periodically modified or hindered to some extent by some inopportune large corn supplies."

Bean, L. H. Measuring the effect of supplies on prices of farm products. Jour. Farm Econ. 15(2): 349-374. Apr. 1933.

Discussion by H. A. Wallace, pp.374-377.

"The specific purpose of this paper, however, is not so much to dwell on the shortcomings of past price analyses, nor to summarize

the results of studies that, to my mind, need complete revision for comparability and usefulness, but rather to illustrate some of the specific problems which seem likely to receive greater emphasis than they have in the past. These illustrations, taken from unpublished studies of the present writer, it is hoped, will stimulate the efforts of others along the lines indicated...

"The first example deals with a simple problem in determining the shifts and changes in slope of a production price curve...

"The second example is an attempt to show how the relation between total production or between total supply and price may be considered as a general demand curve in the sense of a summation of several component demand curves, and also how from these component demand curves one may approximate the so-called instantaneous supply curve of the producer and the demand curve of the dealer or consumer...

"The third illustration presents sample supply and price relations, for three widely different commodities, potatoes, a perishable product disposed of in the domestic markets; wheat, an international food product, predominately subject to supply influences abroad; and cotton, an international industrial commodity subject to changes in industrial conditions in the United States and abroad...

"The fourth example deals with some of the problems involved in determining the effect of consumption on retail prices (of pork) when changes in consumer purchasing power as well as changes in the price of a competing commodity (beef) are taken into account...

"A fifth illustration is an analysis of the gross relation between total farm output to farm prices in which it is shown that in the post-war years gross farm income varied directly with the income of non-agricultural consumers, indicative of unit elasticity for the aggregate of individual commodities, some of which have a greater and others a smaller elasticity than unity.. In the fifth example, an attempt is made to show that the production-price relations generally revealed for farm products also show up in nonagricultural price analysis, such as silk, iron and steel, provided the same reasonable methods are employed...

"The final illustration emphasizes the role of variations in supply in the commodity-price system, particularly as reflected in the margins between prices of any two individual competing commodities (such as pork and beef) and between any two major groups of commodities which compete in the consumers' budget such as agricultural and non-agricultural products."

Bean, L. H. Relation between production, prices, and acreage of potatoes in Idaho. 6pp., 6pp. charts, 5pp. tables, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1931. 1.9 Ec752Rp

"Abstracts of addresses, Pacific Northwest Potato Committee meetings at Rupert, Idaho Falls, Burley, Jerome, Eden, and Caldwell, week of Feb. 23, 1931."

"The purpose of these talks was to acquaint those interested in the current potato situation with some of the basic facts of production prices, and acreage changes of recent years and to draw from

these facts such tentative conclusions concerning prospects for 1931 as may help producers to determine their acreage policies in the spring of 1931. The main conclusions that may be drawn from these facts are:

"(1) The prices received by growers for the 1929 and 1930 crops are likely to lead to a general increase in acreage throughout the country.

"(2) A general increase in acreage...is likely to produce a national crop of around 420,000,000 bushels, compared with about 360,000,000 bushels in 1930.

"(3) A supply of this magnitude would tend to produce a lower price level for the 1931 crop than has been received so far for the 1930 crop, unless a considerable improvement in demand develops before growers begin to market their 1931 crop...

"(5) Should the general level of potato prices be lower in 1931 than in the 1930 season, prices in Idaho are also likely to be lower, but the extent of the decline in the level of prices for Idaho potatoes will depend somewhat on the size of the crop in Idaho and to some extent on the supply of potatoes in the northwestern States..."

Bean, L. H. Relation between production, prices, and acreage of potatoes in North Carolina. 7pp., 5pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1930. 1.9 Ec752R

"Abstracts of addresses given at meetings called by Interstate Early Potato Committee, at Mt. Olivet, Beaufort, Alliance, Aurora, Bethel, Columbia, and Elizabeth City, North Carolina, November 3-8, 1930."

"The purpose of these addresses was to acquaint those interested in the current potato situation with some of the basic facts of production, prices, and acreage changes of recent years and to draw from these facts such tentative conclusions concerning prospects for 1931 as would help producers to determine their acreage policies next spring.

"The main conclusions that may be drawn from these facts are (1) the prices received by growers for the 1930 crop are likely to lead to a general acreage increase in North Carolina as well as in most early producing areas; (2) average yields for the entire early section are likely to be greater than in 1930; (3) that competition from the carry-over in the Northern and Western States is likely to be greater than in 1930; and (4) the level of consumer buying power will be lower in 1931 than in 1930 when the North Carolina crop is marketed. These prospects of increased production and decreased demand point to lower prices in 1931 than were received in 1930." -p.1.

Bean, L. H. The relation between production, prices and acreage of potatoes on the eastern shore of Maryland. 5pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1929. 1.9 Ec752R

Abstract of talks delivered before potato growers and bankers meetings of the Interstate Early Potato Committee with growers,

dealers, cooperatives, bankers and supply agents, October 8-9, Pocomoke City, Snowhill and Princess Anne, Md., on November 21, meeting of Tri-county Bankers Association, Sharptown, Md.

The relation between prices on Eastern Shore, Md., and (1) prices in ten early producing states, and (2) July and August shipments from competing areas, pp.2-3; The relation between prices and subsequent changes in potato acreage in Maryland, pp.3-4.

Bean, L. H. A simplified method of graphic curvilinear correlation. Jour. Amer. Statis. Assoc. 24(n.s.168): 386-397. Dec. 1929. 251 Am3

In chart IV, p.395 "is an analysis of the price of early potatoes received by growers, showing the effect of production of early potatoes and of the competitive effect of the price of old potatoes for the years 1921-1928 inclusive."

In chart V, p.396 "is an analysis of the effect of price and business activity on the domestic mill consumption of cotton for the years 1919 to 1928, inclusive."

A further application of this method by Mr. Bean is given in Application of a Simplified Method of Correlation to Problems in Acreage and Yield Variations in Jour. Amer. Statis. Assoc. 25(n.s.172): 428-439. Dec. 1930.

Bean, L. H. Some interrelations between the supply, price and consumption of cotton. 8pp., 7pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1928. 1.9 Ec752Sc

"Address delivered before the American Statistical Association, New York City, Friday, April 20, 1928."

The purpose of this paper is to present a few of the results of price studies made by the Bureau of Agricultural Economics in relation to cotton.

The effect of supply on price, pp.2-4; The effect of price on supply, p.5; The effect of consumption on price, pp.5-6; The effect of price on consumption, pp.6-7.

Buechel, F. A., and Kedzierski, S. L. Analysis of the price-making forces in the New York egg market. A preliminary report. 69pp., mimeogr., charts. Washington; D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, April 1932. 1.9 Ec724Ane

List of references consulted, p.69.

An analysis of the supply, demand, and other factors bearing on the variations in the prices of Pacific Coast white extras on the New York market.

Buechel, F. A. Wholesale marketing of live poultry in New York City. U. S. Dept. Agr., Tech. Bull. 107, 68pp. Washington, D. C., 1929.

"This bulletin aims to present the economic situation of the live-poultry industry of New York City, including the sources of supply and of demand for this commodity, the growth and present size of the industry, and the different groups of people who are engaged in moving live poultry from the open country to the retail channels in New York City..."

"An analysis of the total costs per carload of marketing live poultry, by States, is included in this study as well as the costs per pound for each of the services rendered, together with net returns to shippers in the various States and from four cities which serve as reshipment points. The method of arriving at and quoting prices and the bearing the price quotation has upon the returns to shippers and the price paid by slaughterhouse men are considered. Attention is given to the determination of the factors which influence the prices of live poultry together with the measurement of these factors. The economies to be attained by a union terminal at which all live poultry might be concentrated preparatory to sale were studied in the course of this survey." -pp.2-3

"In the analysis of live-poultry prices it was found that the following factors (indicated in order of importance) exerted the major portion of the influence: (1) Expected receipts for the week; (2) price for the previous week; (3) temperature; and (4) price for kosher veal." -p.59.

Campbell, C. E. Canned vegetable prices. 15pp., 4pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Jan. 1933. 1.9 Ec752Cv

"The following price-influencing factors were analyzed in this study: (1) pack, (2) carry-over, (3) consumer purchasing power, (4) imports, both fresh and canned, (5) competing supplies of fresh vegetables, (6) home canning, (7) competition in the case of each commodity from other canned vegetables, and (8) influence of the price level of all canned vegetables as a group on the fluctuations in price of each of the commodities."

Campbell, C. E. Factors affecting the price of rice. U. S. Dept. Agr., Tech. Bull. 297, 56pp., charts. Washington, D. C., 1932.

The following is quoted from the author's summary, p.38:

"The size of the United States rice crop, together with carry-over in the United States, is the most important factor affecting domestic prices of rice. The general level of prices of other commodities is also an influential factor. California production is as important as southern production during certain periods of the year on prices of southern rice. Rough rice prices tend to move with prices of milled rice when rough rice is being marketed at a normal rate..."

Conway, H. M. Factors affecting fed cattle prices. U. S. Dept. Agr., Bur. Agr. Econ. Agr. Situation 11(12): 16-17. Dec. 1927.

"In studying the accompanying chart which indicates the principal factors causing variations in prices of fed cattle, it is essential to know that the upward trend in cattle prices and the high prices during the World War were largely caused by the declining value of the dollar, or, in other words, were the result of the higher general price level for all commodities..."

"Market supplies largely control the season-to-season variations in prices. The total number of fed cattle marketed is the most important factor. The effect of this on the long-time variations in prices is also particularly significant but is obscured almost entirely by the fluctuations caused by the general price level. Second in importance is the proportion of the better grades of fed cattle in the market supply, or the general character of the supply, especially as to the degree of fatness. The price of corn largely governs the degree to which cattle are finished...

"Demand factors are rather numerous but as a whole cause less direct variation in prices than the supply factor..." Among the demand factors mentioned are competitive effect of pork price on the demand for beef, industrial activity, export demand, increased population, and current demand for feeding cattle. Hide prices have some influence on the lower grades of cattle.

Cox, A. B. Cotton prices and markets. U. S. Dept. Agr. Bull. 1444, 78pp. Washington, D. C., 1926.

"An understanding of the marketing of cotton involves a knowledge of the demand for cotton, the supply of it, the machinery developed to bring demand and supply into trading relations, and the historical development of these three market factors. This analysis of the fundamental factors involved in cotton price making and this description of the markets in which prices are made is a contribution to that understanding." -p.1.

Elliott, F. F. Adjusting hog production to market demand. Ill. Agr. Expt. Sta. Bull. 293, pp.503-567, charts. Urbana, 1927.

"This bulletin, prepared in cooperation with the U.S.D.A., Bureau of Agricultural Economics, includes a discussion of why hog prices fluctuate, based largely on the statistical analysis of hog prices in U.S.D.A. Bulletin 1440...; the results of statistical studies of the causes of the fluctuations in the supply of hogs and of the response of hog producers in different sections of Illinois to the corn-hog ratio; and a discussion of the practices of the majority of farmers, what certain successful farmers are doing to adjust their hog production to market demand, and of the possibilities of smoothing out the hog-price cycle..." -Expt. Sta. Rec. 57: 685. 1927.

The following is quoted from p.513:

"Supply of hogs (includes storage holdings) is the most important single factor in determining the price of hogs. Increases in population and changes in the value of money are next in importance, followed by foreign demand for pork products, the price of substitute commodities, and general business conditions."

Ezekiel, Mordecai. Correlations on hog forecasting. 16pp., typewritten. [Apr. 14, 1928] Pam. Coll.

Copy in the library of the Bureau of Agricultural Economics.

Relation of forecasted supply of hogs and foreign demand index, by periods, to hog prices for period, pp.10-16.

Ezekiel, Mordecai. Correlations with beef prices, 1908 to 1914. 4pp., typewritten. Feb. 11, 1926. Pam. Coll.

Copy on file in the library of the Bureau of Agricultural Economics.

"In an attempt to see how far beef prices could be explained by factors of the same type as had explained 80 per cent or more of hog price variations, a study was made of beef prices for prewar years...

"This preliminary study indicates that in spite of the complexity of the market for beef animals, the general price determining forces are as subject to measurement as in the hog market."

Among the factors studied were monthly beef and cattle slaughter, trend of slaughter, pig iron production, long-time trend of demand, etc.

Ezekiel, Mordecai. Factors related to lamb prices. pp.233-260. Pam. Coll.

"Reprinted for private circulation from the Journal of Political Economy, vol. XXXV, No. 2, April 1927."

"A formula is derived, the index of multiple correlation for which shows that 96.4 per cent of the variation in the price per 100 lbs. of round dressed lamb (not deflated) from 1907 to 1925 can be explained in terms of the mathematical relation to the following factors: Months of year, beginning with January, 1907; dressed lamb per capita per month of 30.4 days; hog prices divided by Bureau of Labor Index of Wholesale Prices of all commodities; steer prices divided by Bureau of Labor Index of Wholesale Prices; veal prices divided by Bureau of Labor Index of Wholesale Prices; Harvard Price Index of Business Cycles divided by Bureau of Labor Index of Wholesale Prices; Snyder's Index of General Price Level; and months of the year, from 1 to 12.

"The apparent importance of the several factors in per cent determination were long-time trend -0.3, lamb slaughter +29.9, hog prices -0.2, steer prices -3.1, veal prices -1.4, business activity +0.7, and general price level +68.3.

"The net changes in lamb prices, due to a 5 per cent increase in the following independent variables, with other factors in each case held constant, were price of hogs +0.43, price of steers +1.60, price of veals +0.32, supply of lamb -3.19, price index of business cycles +0.48, and index of general price level +4.00. A slightly less than proportional change was obtained for 10 and 15 per cent increases." -Expt. Sta. Rec. 57: 786. 1927.

Ezekiel, Mordecai. Some considerations on the analysis of the prices of competing or substitute commodities. Econometrica 1(2): 172-180. Apr. 1933.

Paper read before a joint meeting of the Econometric Society and Section K of the American Association for the Advancement of Science, Syracuse, New York, June, 1932.

Ezekiel, Mordecai. Statistical analyses and the 'laws of price.' Quart. Jour. Econ. 42(2): 199-227. Feb. 1928. 280.8 Q2

"An exposition of the statistical approach to the study of price problems. See especially pp.219-223 for a discussion of the effect of price upon subsequent production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 8. See also for effect of supply upon price.

Ezekiel, Mordecai. A statistical examination of the problem of handling annual surpluses of non-perishable farm products. Jour. Farm. Econ. 11(2): 193-226. Apr. 1929.

Also issued in reprint form.

Also issued in mimeographed form by the U. S. Bureau of Agricultural Economics.

"A discussion of ways of dealing with farm surpluses may consider either the institutional means which might be established for disposing of surpluses, or the possibilities of increasing returns to farmers by disposing of the surpluses in various ways. This paper will be confined to the second problem. The possible effects on returns to farmers of such operations as storing from year to year and export dumping will be considered in the light of what is known about price behavior from statistical studies of prices." -p.193. See also pp.207-211 for effect of price-raising on subsequent production.

Unpublished price-analysis studies of the following were used in the preparation of this paper: E. M. Daggit, studies of factors affecting wheat prices; L. H. Bean, a study of the probable effects of export dumping of wheat; Owen L. Dawson, studies of the export demand for various pork products.

The computations on cotton are based on studies by the author and by L. H. Bean.

Ezekiel, Mordecai. Two methods of forecasting hog prices. Amer. Statis. Assoc. Jour. 22(n.s.157): 22-30. Mar. 1927. 251 Am3

"Charts are given and discussed showing estimates (computations made after the event) from July 1924 to June 1925 and forecasts (computed before the event) from July 1925 to May 1927, using the pre-war formula and 'synthetic demand-curve' method..." -Expt. Sta. Rec. 57: 85. 1927.

Haas, G. C., and Ezekiel, Mordecai. Factors affecting the price of hogs. U. S. Dept. Agr. Bull. 1440, 68pp. Washington, D. C., 1926.

"The dominant influences in the hog market, as shown by this study, are (1) the supply of hogs on the market and expected to arrive on the market within the next few months, (2) the quantity of hog products in storage, (3) the general price level, (4) general business conditions, and (5) the prices of alternative products. The general levels of demand, both here and abroad, are both important, but ordinarily change only slowly." -p.53.

Harlan, C. L. Relation between the weekly receipts and prices of western dressed lamb at New York City. U. S. Dept. Agr., Bur. Agr. Econ., Agr. Situation 12(5): 17-19. May 1928. 1 Ec7Ag

A chart shows "the inverse relationship that exists between the weekly price and supply of western dressed lamb carcasses in the New York market during the last two years. Large receipts resulted in relatively low prices whereas small receipts were accompanied by high prices."

- Hedden, W. P., and Cherniack, Nathan. Measuring the melon market. A preliminary report. 24pp., charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, April 1924.
1.9 Ec7Mn

Issued in cooperation with the Port of New York Authority.

"Prices of watermelons are determined almost entirely by the supply, at the present time, largely because supply is continually in excess of demand...Sales of watermelons, on the other hand, are related closely to demand even at the present time." -pp.15-16.

- Hoffman, G. W. Trading in corn futures. U. S. Dept. Agr., Tech. Bull. 199, 82pp. Washington, D. C., 1930.

"It is proposed in this study to analyze and summarize the information relating to corn futures during this 5-year [1923-1928] period, making such comparison with future trading in other grains, and especially wheat, as seem worth while. Particular emphasis will be placed upon the manner and extent to which the trade in corn futures related itself to the price of corn. Because of the outstanding importance of the Chicago Board of Trade as a futures market, unless otherwise stated, the data will relate to this exchange." -p.2.

Corn supplies and prices in recent years, pp.10-12; Corn futures: volume of trading, open commitments, and prices compared, pp.12-16; Deliveries and deliverable supplies in their relation to prices, pp.16-21.

- Kantor, H. S. Factors affecting the price of peaches in New York market. U. S. Dept. Agr., Tech. Bull. 115, 64pp., charts. Washington, D. C., 1929.

Gives the results of a study made in cooperation with the New Jersey experiment stations. Abstracted in Expt. Sta. Rec. 61: 486-487. 1929.

Peach supplies and peach prices, pp.2-18; reasons for differences in price for individual lots of peaches, pp.18-29.

- Killough, H. B. What makes the price of oats. U. S. Dept. Agr. Bull. 1351, 39pp. Washington, D. C., 1925.

Some selected references on grain price studies and statistical method, pp.38-39.

"It is pointed out that the oat crop is grown and consumed almost entirely within the United States, for which this study is made, also that a single annual supply of this crop becomes available for market within a short period of the year. It is assumed, therefore, that it may be treated in a price analysis by assuming a normal annual price, the problem being to discover the factors which determine this annual price and to measure their influence.

"This study defines these factors as production and the area of the oat market, the trend of prices of oats, the values of large and small crops, the stabilizing influence of cooperative marketing, and certain others, including changes in the general price level, the year-to-year carry over of oats, substitute crops such as corn, and production of oats in Canada.

"The seasonal movement of prices during the year is also analyzed, and two indicators of the volume of production which anticipates harvest, namely, the price of September futures and the monthly condition of the crop, are compared from the point of view of their relative accuracy in predicting future prices. Statistical methods used in the study of oat prices are applied also to wheat, in order to emphasize the difference in the method of treatment necessary for this crop." -Expt. Sta. Rec. 54: 82. 1926.

A method of estimating the May price of spring wheat. U. S. Dept. Agr., Bur. Agr. Econ., Foreign Crops and Markets 10(19): 549-551. May 11, 1925.

Describes a method of estimating the May price of spring wheat at Chicago several months in advance as made in a recent study by the Division of Statistical and Historical Research.

Park, J. W. Market supplies and prices of apples. U. S. Dept. Agr. Circ. 91, 92pp. Washington, D. C., 1929.

Price level as influenced by supply, p.22; origin of supply as a price factor, p.28.

Sarle, C. F. Forecasting the price of hogs. 22pp. Amer. Econ. Rev. v. 15, no. 3, supplement no. 2, Sept. 1925. 280.8 Am32

"An essay awarded the Babson prize by the American Economic Association."

"The price of corn at a given time depends primarily upon the supply. Supply is determined principally by the weather...The price of hogs at a particular time depends on various factors of supply and demand. The weather has relatively little direct influence on the supply of hogs. The size of the corn crop for several years past is an important factor affecting the supply of hogs."

Schoenfeld, W. A. Some economic aspects of the marketing of milk and cream in New England. U. S. Dept. Agr. Circ. 16, 74pp., charts, Washington, D. C., 1927.

The producer and milk prices (retail delivered milk and store sales, relation of retail prices to consumption, influence of producer prices upon milk supply, relation of basic economic factors to milk-price policies), pp.29-50. The last three sections of this part of the circular were prepared by M. J. B. Ezekiel.

Sherman, W. A., Fiske, G. B., and Miller, O. D. Marketing main-crop potatoes. U. S. Dept. Agr. Farmers' Bull. 1317, 35pp. Washington, D. C., 1923.

"This bulletin discusses some of the underlying facts and conditions that influence prices, the sources and character of the information the grower should use, and the differing marketing problems of the producers of the late or main crop. The location, shipping season and relative importance of the heavy shipping districts are shown, with brief descriptions of the methods of marketing pursued in typical areas." -p.II.

Smith, B. B. Factors affecting the price of cotton. U. S. Dept. Agr., Tech. Bull. 50, 75pp., charts. Washington, D. C., 1928.

Literature cited, pp.72-74.

Effect of size of supply on price and value of crop, pp.3-7;
Factors affecting changes in cotton acreage, pp.7-9; Factors influencing monthly prices of cotton (influence of supply upon prices, influence of demand upon prices, influence of purchasing power of consumers, relative importance of supply and demand factors in cotton price fluctuations), pp.9-18; Statistical analysis of factors influencing cotton prices, pp.18-56.

Stine, O. C. Price analysis as a basis for effective marketing programs. Natl. Assoc. Marketing Officials. Proc. 10(1928): 59-65.

Stine, O. C. A program for the improvement and elaboration of data needed for commodity price forecasting. Jour. Farm Econ. 12(1): 107-118. Jan. 1930.

"Enough is known about prices to enable competent analysts to make price forecasts sufficiently accurate to be useful in planning production, marketing, consumption, or buying to the advantage of the producer, the distributor, or the consumer. Whenever it is possible by such means to bring about a more accurate adjustment of prices to fundamental supply and demand conditions, the producer, the distributor and the consumer may all profit through the elimination of economic wastes. These two propositions are rephrased from the conclusion of the paper read last year at the meeting of the Farm Economic Association on 'Progress in Price Analysis and an Appraisal of Success in Price Forecasting.' I am restating these two propositions as my justification for advocating great care and large expenditures in the collection and analysis of data as to production, prices, and consumption of commodities, for use in price forecasting." -p.107.

Stine, O. C. Progress in price analysis and an appraisal of success in price forecasting. Jour. Farm Econ. 11(1): 128-140. Jan. 1929.

Strowbridge, J. W. Origin, distribution and market price of the commercial watermelon crop. U. S. Dept. Agr., Tech. Bull. 398, 60pp., charts. Washington, D. C., 1933.

Supply and price, pp.42-58.

The following is quoted from p.59:

"Consumer demand, quality, volume of supply, use of competitive fruits, and weather conditions in the producing areas and in the consuming centers are among the factors advanced by the trade as reasons for the changing price of watermelons. Any one or all of these factors may affect watermelon prices provided their influence is sustained for a continued period of time, but the day-to-day changes in price that occur are not easily explained."

U. S. Dept. of agriculture, Bureau of agricultural economics. The direct marketing of hogs. U. S. Dept. Agr. Misc. Pub. 222, 230pp. Washington, D. C., 1935.

See particularly pp.13-16 and chapter 7, Factors Affecting Hog Prices, and chapter 8, Competition for Hogs.

"The chief factors causing hog prices to change in this country during the last 20 years have been: (1) Changes in the buying power of domestic consumers, (2) variations in hog production, (3) changes in the charges for processing and distribution, and (4) changes in foreign demand for American hog products. Statistical evidence indicates that changes in hog prices in recent years have been due to causes other than changes in marketing methods including the rapid growth of direct marketing." -p.13.

U. S. Dept. of agriculture, Bureau of agricultural economics. Economic situation of hog producers. Letter from the Secretary of agriculture transmitting in response to Senate resolution No. 281, a report pertaining to the hog situation and the probable effects of the proposed export debenture, equalization fee, and domestic allotment plans for farm relief, on the economic position of hog producers. U. S. 72d Cong., 2d sess., Senate Doc. 184, 87pp. Washington, U. S. Govt. Print. Off., 1933. 1 Ec7Ec

How hog prices are determined, pp.14-17; Domestic demand for hog products, pp.17-22; The foreign outlet for United States hog products, pp.22-29:

For effects of various plans on prices see pp.46, 51, 57, etc.

U. S. Dept. of agriculture, Bureau of agricultural economics. The world cotton situation, with outlook, 1931-32, and the long-time outlook for southern agriculture. U. S. Dept. Agr., Misc. Pub. 104, 76 pp. Washington, D. C., 1930.

"See pp.25-37 for a non-technical discussion of changes in cotton acreage and production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 23. See also for effect of supply and demand on price.

U. S. Dept. of agriculture, Bureau of agricultural economics. The world wheat outlook, 1930 and facts that farmers should consider. U. S. Dept. Agr. Misc. Pub. 95, 40pp., charts. Washington, D. C., 1930.

World supply and price, pp.8-13; the effect of changes in production upon prices, pp.32-33. See also for influence of demand on price.

U. S. Dept. of agriculture, Bureau of animal industry. Conditions affecting the price of hogs. U. S. Dept. Agr., Bur. Animal Indus. Repts. 6th & 7th, 1889 and 1890, pp.84-92. 1 An5

The following is quoted from p.89:

"From these facts we may conclude that during the eighteen years covered by the tables and charts the following general rules appear to bear upon this question: (1) The price of hogs increased with the

price of corn without regard to the amount of hog product placed upon the market. (2) After an advance in the prices of corn and hogs for a series of years the price of corn dropped one year before the decline came in the price of hogs. (3) The fluctuation in the quantity of hog product per capita of population which followed an advance or decline in the price of corn after having moved in the opposite direction did not usually occur until a year had intervened..."

Following the analysis of factors affecting prices of hogs, factors affecting the price of corn are considered.

"The price of corn is therefore governed primarily by the law of supply and demand, but it may also be influenced by the financial condition of the country, the purchasing power of money, and the relative supply of other cereals, and perhaps by other conditions."

U. S. Dept. of agriculture, Bureau of agricultural economics. Discussion of price forecasting at a conference with state representatives. Annual outlook meetings of the Bureau of agricultural economics, January 26, 1928. 14pp., 15pp. charts, mimeogr. Washington, D. C., 1928. 1.9 Ec7AgrD

Contents: Can prices be forecasted? abstract of discussion by O. C. Stine, pp.1-4; Price forecasting, abstract of discussion by M. J. B. Ezekiel, pp.5-8; Factors affecting the price of corn, abstract of discussion by C. M. Purves, p.9; Price forecasting, abstract of discussion by L. H. Bean, pp.10-14.

U. S. Dept. of agriculture, Bureau of agricultural economics. World trade barriers in relation to American agriculture. Letter from the Secretary of agriculture transmitting in response to Senate resolution No. 280, seventy-second Congress, first session, submitted by Senator Norbeck, a report pertaining to restrictions upon international trade in major agricultural products throughout the world, measures undertaken in several countries to protect the position of their farm producers, and the effects of these restrictions and measures upon prices of farm products and the welfare of American farmers. U. S. 73d Cong., 1st sess., Senate Doc. 70,540pp. Washington, D. C., 1933.

Washburn, R. S., and Martin, J. H. An economic study of broomcorn production. U. S. Dept. Agr. Tech. Bull. 347, 42pp., charts. Washington, D. C., 1933.

Relation of supply of broomcorn to price received, pp.14-17.

See pp.16-17 for a chart and short discussion of the influence of price on acreage.

Working, E. J. Evaluation of methods used in commodity price forecasting. Jour. Farm Econ. 12(1): 119-138. Jan. 1930.

Working, E. J. Factors affecting the timing of wheat price movements. Internatl. Conf. Agr. Econ., 2d, Cornell Univ., Ithaca, N. Y., 1930, pp.706-714. 281.9 In82

- Working, E. J. Production and demand: contrasts between agriculture and other industries. Chapter XI, pp.160-191.

Reprinted from Stabilization of Employment: a symposium held under the auspices of the American Association for the Advancement of Science ed. by C. F. Roos, Bloomington, Ind., Principia Press, Inc., 1933. (283 R67)

The writer discusses "the comparative stability of employment in agriculture and other industries as it relates to other business cycle factors, especially as it relates to demand." The chapter is in eleven parts: introduction, stability of agricultural employment and production, the cost of employment stability to agriculture, influence of supply and demand on prices, effects of combating falling prices by curtailing production, a depression is a spasm of underproduction, need falling prices cause under-production, control of production versus free competition, international causes of changing price levels, reaction of the price level to production curtailment, conclusion.

- Wright, Sewall. Corn and hog correlations. U. S. Dept. Agr. Bull. 1300, 60pp. Washington, D. C., 1925.

"The argument that corn supplies, corn prices, hog supplies, and hog prices form a closely interrelated system is supported by a detailed correlation analysis of the available corn and hog data for the period from 1870 through 1915." -Wells, O. V. Farmers' response to price; a selected bibliography, item 62.

- Zapoleon, L. B. Geographical phases of farm prices: oats. U. S. Dept. Agr. Bull. 755, 28pp. Washington, D. C., 1919.

"In this bulletin a survey is made of the sectional differences throughout the United States in the producers' prices of oats. Some consideration is also given to the influence of producing areas, trade routes and consuming centers upon such variations, and to local factors which qualify price advantage- factors such as relative yields in bushels to the acre and costs of production." -p.1.

- Zapoleon, L. B. Geographical phases of farm prices: corn. U. S. Dept. Agr. Bull. 696, 53pp. Washington, D. C., 1918.

"The present investigation is confined chiefly to the influence of producing areas, trade routes, and consuming centers upon prices paid to farmers for corn and to a survey of the regional differences in such prices." -p.2.

- Zapoleon, L. B. Geography of wheat prices. Summary of conditions affecting farm prices of wheat in different parts of the United States. U. S. Dept. Agr. Bull. 594, 46pp. Washington, D. C., 1918.

"This publication deals with the wide variation in the producers' price of wheat throughout the continental United States."

PRICE-EFFECT ON PRODUCTION

Bean, L. H. Applications of a simplified method of graphic curvilinear correlation. A preliminary report. 2 pts., mimeogr., charts. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1929.

The following is quoted from p. 1:

"The purpose of this paper is to present this simple approach to multiple curvilinear correlation. The method employed will be demonstrated with six examples, or cases, of actual problems chosen from different fields of economic relationships, in the hope that this 'case' method of presentation will not only make clear the simple steps involved, but will also suggest their application to similar problems likely to be encountered by the analyst of variations in economic data. It will be demonstrated by means of a generalized problem, but in this final illustration also we shall refrain from generalization. Technical language will be used as little as possible, but the reader will need to study closely the graphic presentations, for the method is essentially one of graphic correlation. In each example the data used and the steps in the analysis will be so indicated that the reader may properly appraise the reasonableness of the approach and the reliability of the results. The assumptions and logic involved in each of the six special cases will also be indicated but this only briefly." Titles of each of these cases follow:

Case I, pp.2-4: Relation of (1) production of early potatoes and (2) the price of old potatoes to (3) the price received by producers of early potatoes.

Case II, pp.4-5: Relation of cotton prices and business conditions to the domestic mill consumption of cotton.

Case III, pp.5-7: Cotton consumption (continued).

Case IV, pp.7-8: Effect of supply and other factors on the yearly average of farm price of apples.

Case V, pp.8-9: Effect of supply and other factors on the New York price of California oranges.

Case VI, pp.9-10: Effect of price on acreage of cotton harvested in the United States.

Part II is entitled The Method Applied to Changes in Acreages, Yields and Livestock Numbers. Three examples, or cases, are given.

Case VIII, pp.1-2: The relation of price to changes in the United States acreage of cabbage. Case IX, pp.3-4: The relation of price to changes in the number of hogs on farms in the United States on January 1.

Bean, L. H. Characteristics of agricultural supply and demand curves. 6pp., 11pp. charts, mimeogr. [Washington, D. C.] U. S. Dept. of Agriculture, Bureau of Agricultural Economics [1933] 1.9 Ec752 Cha

This is a summary of an address before Section K of the American Association for the Advancement of Science, in a joint program with the Econometric Society, Syracuse, N. Y., June 22, 1932.

The following is quoted from the writer's introductory paragraphs:

"This paper attempts to bring together a number of studies, made by the writer during the past three or four years, which have been of practical use in anticipating changes in prices, marketings, and subsequent farm production. They are an outgrowth of the price analysis work sponsored by the Bureau of Agricultural Economics in its attempts to supply farmers with outlook information relative to prospective changes in supply and demand conditions. The topics covered...are (1) a simple illustration of an approach to the instantaneous supply and demand curves for commodities of fixed annual supply. The supply curves dealt with...are the current-supply curves representing supplies offered from a total fixed available quantity on hand, (2) relations between producer, dealer and total demand curves and two views of price determination, (3) shifts in demand curves, that involve changes in slope (of elasticity) and changes in level due to the value of money, population growth, etc., (4) comparison of agricultural with nonagricultural demand curves, and (5) subsequent-supply curves, which show the effect of current supplies of the following season or seasons. The method of analysis used...is the simplified graphic approach to multiple curvilinear correlation described by the writer in the Journal of the American Statistical Association in December, 1929, and December, 1930." Commodities for which curves are given are potatoes, pig iron and steel, meat animals, and hogs.

Bean, L. H. Factors related to acreage, production, and prices of potatoes in Florida. 10pp., 9pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1931. 1.9 Ec7637p

"Summary of outlook talks presented to growers in La Crosse and Hastings, Florida, November, 1931."

The following is quoted from pp.1-2:

"The facts contained in the following statement bear on the 1931 potato situation in relation to the prospects for production, demand, and prices for the 1932 Florida potato crop. They indicate that:

"The low prices received by Florida growers in 1931 resulted largely from a record supply of early potatoes available during the months of March, April, and May... The supply of early potatoes in Florida and other States that market during the Florida season - March, April, and May will of course depend on the acreages planted in 1931-32 and on the yields per acre obtained...The acreages to be planted in Florida and in the other Gulf States will be influenced as they have been in the past by such factors as the prices received for the 1931 crop, the credit conditions prevailing in these several areas, and the price situations this winter and at planting time that will prevail in the northern potato markets. Prices as low as those received in 1931 in Florida and in the other Southern early producing States have in the past tended toward acreage reductions. The supply of late crop potatoes in the Northern States held over from the 1931 crop and marketed after March in competition with the 1932 early crop is considerably greater than that available in the

spring of 1931...But in addition to this increased supply, the very low prices that have prevailed at the Northern shipping points have restricted current shipments and a larger proportion of a larger crop is now available in competition with the 1932 early potato crop...

"The marketing of next March, April, and May face this greatly reduced consumer demand [referred to in omitted section] in which there is usually no noticeable improvement for several months after business activity has stopped declining.

"The level of potato prices in Florida next spring will depend on the course of prices in the Northern markets this winter and on the supply of early potatoes produced in 1932...

"Obviously in view of the low level of the potato markets this season because of the industrial depression and ample supplies of old potatoes Florida growers can hardly anticipate the prices received for the 1931 crop if only a moderate reduction in the supply of early potatoes takes place."

Bean, L. H. Factors related to production, prices, and acreage of potatoes in Maine. 5pp., 5pp. charts, 3pp. tables, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1931. 1.9 Ec752Fp

"Abstract of address given at county agent meetings, Maine Agricultural College, Orono, Maine, February 5, 1931."

"The purpose of this address was to bring together some of the outstanding facts concerning the fluctuations in acreage, yield, production, and prices of Maine potatoes and to derive from them certain relations that might be helpful in judging probable supply and price conditions for the 1931 season.

"The main conclusions that may be drawn from these facts bearing on 1931 prospects are: (1) the price that is likely to prevail at Presque Isle, Maine for the 1931 crop will be determined very largely by national supply and demand conditions and partly by the production in the Northeastern States. (2) the national supply in 1931 is likely to be larger than in 1930 because the relatively high prices received for the 1929 and 1930 crops were sufficient to induce a general acreage expansion and because normal weather conditions in 1931 would result in an average yield for the country as a whole higher than the abnormally low yields of 1929 and 1930. (3) similar indications point to a larger supply in the Northeast, New England, New York and New Jersey. (4) the 1930-31 business depression has gone so far below normal that a very marked improvement in consumer purchasing power is unlikely by the time the Maine crop begins to be marketed and (5) the larger national supply together with a larger local supply in prospect will more than offset any moderate advance in consumer demand with the result that the level of prices in Maine in the fall and winter of 1931-32 is likely to be lower than in 1930-1931."

Bean, L. H. Potato prices and acreage stability. pp.53-61. Pam. Coll.

"Reprint from the Proceedings of the seventeenth annual meeting of the Potato Association of America, December 1930."

This statement "is intended to clarify certain facts concerning the producers' acreage response to price and to indicate their bearing on the problem of stabilizing production... Most of this statement deals with the nature of the potato producers' response to price."

-p.53.

Bean, L. H. Relation between production, prices, and acreage of potatoes in Idaho. 6pp., 6pp. charts, 5pp. tables, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, 1931. 1.9 Ec752Rp

"Abstracts of addresses, Pacific Northwest Potato Committee meetings at Rupert, Idaho Falls, Burley, Jerome, Eden, and Caldwell, week of Feb. 23, 1931."

"The purpose of these talks was to acquaint those interested in the current potato situation with some of the basic facts of production prices, and acreage changes of recent years and to draw from these facts such tentative conclusions concerning prospects for 1931 as may help producers to determine their acreage policies in the spring of 1931. The main conclusions that may be drawn from these facts are:

"(1) The prices received by growers for the 1929 and 1930 crops are likely to lead to a general increase in acreage throughout the country.

"(2) A general increase in acreage...is likely to produce a national crop of around 420,000,000 bushels, compared with about 360,000,000 bushels in 1930.

"(3) A supply of this magnitude would tend to produce a lower price level for the 1931 crop than has been received so far for the 1930 crop, unless a considerable improvement in demand develops before growers begin to market their 1931 crop...

"(5) Should the general level of potato prices be lower in 1931 than in the 1930 season, prices in Idaho are also likely to be lower, but the extent of the decline in the level of prices for Idaho potatoes will depend somewhat on the size of the crop in Idaho and to some extent on the supply of potatoes in the northwestern States..."

Bean, L. H. Relation between production, prices, and acreage of potatoes in North Carolina. 7pp., 5pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1930. 1.9 Ec752Rn.

"Abstracts of addresses given at meetings called by Interstate Early Potato Committee, at Mt. Olivet, Beaufort, Alliance, Aurora, Bethel, Columbia, and Elizabeth City, North Carolina, November 3-8, 1930."

"The purpose of these addresses was to acquaint those interested in the current potato situation with some of the basic facts of production, prices, and acreage changes of recent years and to draw

from these facts such tentative conclusions concerning prospects for 1931 as would help producers to determine their acreage policies next spring.

"The main conclusions that may be drawn from these facts are (1) the prices received by growers for the 1930 crop are likely to lead to a general acreage increase in North Carolina as well as in most early producing areas; (2) average yields for the entire early section are likely to be greater than in 1930; (3) that competition from the carry-over in the Northern and Western States is likely to be greater than in 1930; and (4) the level of consumer buying power will be lower in 1931 than in 1930 when the North Carolina crop is marketed. These prospects of increased production and decreased demand point to lower prices in 1931 than were received in 1930." -p.1.

Bean, L. H. The relation between production, prices and acreage of potatoes on the eastern shore of Maryland. 5pp., mimeogr. Washington, U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1929. 1.9 Ec752R

Abstract of talks delivered before potato growers and bankers meetings of the Interstate Early Potato Committee with growers, dealers, cooperatives, bankers and supply agents, October 8-9, Pocomoke City, Snowhill and Princess Anne, Md., on November 21, meeting of Tri-county Bankers Association, Sharptown, Md.

The relation between prices on Eastern Shore, Md., and (1) prices in the early producing States, and (2) July and August shipments from competing areas, pp.2-3; The relation between prices and subsequent changes in potato acreage in Maryland, pp.3-4.

Bean, L. H. Some interrelations between the supply, price and consumption of cotton. 8pp., 7pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, 1928. 1.9 Ec752Sc

"Address delivered before the American Statistical Association, New York City, Friday, April 20, 1928."

The purpose of this paper is to present a few of the results of price studies made by the Bureau of Agricultural Economics in relation to cotton.

The effect of supply on price, pp.2-4; The effect of price on supply, p.5; The effect of consumption on price, pp.5-6; The effect of price on consumption, pp.6-7.

Campbell, C. E. Canned vegetable prices. 15pp., 4pp. charts, mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics. Jan. 1933. 1.9 Ec752Cv

"The following price-influencing factors were analyzed in this study: (1) pack, (2) carry-over, (3) consumer purchasing power, (4) imports, both fresh and canned, (5) competing supplies of fresh vegetables, (6) home canning, (7) competition in the case of each commodity from other canned vegetables, and (8) influence of the price level of all canned vegetables as a group on the fluctuations in price of each of the commodities."

Campbell, C. E. Factors affecting the price of rice. U. S. Dept. Agr., Tech. Bull. 297, 56pp., charts. Washington, D. C., 1932.

Acreage changes as affected by farm prices, pp.2-4; acreage changes due to prices, pp.27-28.

Elliott, F. F. Adjusting hog production to market demand. Ill. Agr. Expt. Sta. Bull. 293, pp.503-567, charts. Urbana, 1927.

"This bulletin, prepared in cooperation with the U.S.D.A. Bureau of Agricultural Economics, includes a discussion of why hog prices fluctuate, based largely on the statistical analysis of hog prices in U.S.D.A. Bulletin 1440...; the results of statistical studies of the causes of the fluctuations in the supply of hogs and of the response of hog producers in different sections of Illinois to the corn-hog ratio; and a discussion of the practices of the majority of farmers, what certain successful farmers are doing to adjust their hog production to market demand, and of the possibilities of smoothing out the hog-price cycle..." -Expt. Sta. Rec. 57: 685. 1927.

The following is quoted from p.513:

"Supply of hogs (includes storage holdings) is the most important single factor in determining the price of hogs. Increases in population and changes in the value of money are next in importance, followed by foreign demand for pork products, the price of substitute commodities, and general business conditions."

Elliott, F. F., and Wells, O. V. Farmers' response to price in the production of flax. A preliminary report. 33pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Farm Management and Costs, December 1930. 1.9 Ec762Ff

"Changes in flax acreage in the United States and in Minnesota, North Dakota, South Dakota, and Montana are related to the flax-wheat acreage return ratio." -Wells, O. V. Farmers' response to price; a selected bibliography, item 28.

Elliott, F. F. The nature and measurement of the elasticity of supply of farm products. Jour. Farm Econ. 9(3): 288-302. July 1927.

"The technical coefficient of elasticity is defined and the general nature of the farmers' response to price and the problem of method are discussed." -Wells, O. V. Farmers' response to price; a selected bibliography, item 7.

Ezrael, Mordecai, Rauchenstein, Emil, and Wells, O. V. Farmers' response to price in the production of market milk. A preliminary report. 16pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Farm Management and Costs, May 1932. 1.9 Ec762Ffm

"Changes in market milk production in the Boston, the Baltimore, and the St. Paul-Minneapolis milk-sheds are related to the appropriate milk-feed price ratio." -Wells, O. V. Farmers' response to price; a selected bibliography, item 29.

Ezekiel, Mordecai. The response of milk producers in different type of farming areas to changes in the price of feed, milk and other factors. 13pp., typewritten. [Washington, D. C., 1927] Pam. Coll. Talk before meeting of the New England Research Council, Boston, Mass., Oct. 27, 1927.

Ezekiel, Mordecai. Statistical analyses and the 'laws of price.' Quart. Jour. Econ. 42(2): 199-227. Feb. 1928. 280.8 Q2

"An exposition of the statistical approach to the study of price problems. See especially pp.219-223 for a discussion of the effect of price upon subsequent production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 8. See also for effect of supply upon price.

Ezekiel, Mordecai. A statistical examination of the problem of handling annual surpluses of non-perishable farm products. Jour. Farm Econ. 11(2): 193-226. Apr. 1929.

Also issued in reprint form.

Also issued in mimeographed form by the U. S. Bureau of Agricultural Economics.

"A discussion of ways of dealing with farm surpluses may consider either the institutional means which might be established for disposing of surpluses, or the possibilities of increasing returns to farmers by disposing of the surpluses in various ways. This paper will be confined to the second problem. The possible effects on returns to farmers of such operations as storing from year to year and export dumping will be considered in the light of what is known about price behavior from statistical studies of prices." -p.193. See also pp.207-211 for effect of price-raising on subsequent production.

Unpublished price-analysis studies of the following were used in the preparation of this paper: E. M. Daggitt, studies of factors affecting wheat prices; L. H. Bean, a study of the probable effects of export dumping of wheat; Owen L. Dawson, studies of the export demand for various pork products.

The computations on cotton are based on studies by the author and by L. H. Bean.

Haas, G. C., and Ezekiel, Mordecai. Factors affecting the price of hogs. U. S. Dept. Agr. Bull. 1440, 68pp. Washington, D. C., 1926.

Ways in which farmers adjust operations to hog prices, pp.1-3. Reaction of farmers to the changes in the corn-hog price relation, pp.22-23.

Holmes, C. L. Shifts in production areas in the United States induced by changes in farm prices and farm technique. 31pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Farm Management and Costs, March 1931. 1.9 Ec762Shp

"The major shifts in the distribution of agricultural production in the United States from 1920 through 1930 are described and explained in relation to changes in the agricultural price situation, in insect damage and soil exhaustion, and in methods of production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 72.

Hutson, J. B. Factors affecting the acreage of flue-cured tobacco. 16pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, Division of Statistical and Historical Research, December 1930. 1.9 Ec752F1

"Changes in the acreage of flue-cured tobacco are related to the price received the first and the second season preceding, the acreage change the first season preceding, and a time trend." -Wells, O. V. Farmers' response to price; a selected bibliography, item 38.

Manny, T. B. Farmer opinions and other factors influencing cotton production and acreage adjustments in the South. U. S. Dept. Agr. Circ. 258, 42pp. Washington, D. C., 1933.

"A socio-economic study of farmer opinions and other factors, including prices, credit, and outlook information, influencing acreage adjustments in selected counties in the Mississippi Delta, the piedmont, and the South Atlantic coastal plain areas of the South." -Wells, O. V. Farmers' response to price; a selected bibliography, item 40.

Myers, Lawrence. Fertilizer consumption in cotton area varies with return from crop. U. S. Dept. Agr. Yearbook of Agriculture, 1928, pp.292-293, 1929.

"The effects of fertilizer prices, cotton prices and the preceding cotton acreage and yield on fertilizer consumption in the cotton area are shown." -Wells, O. V. Farmers' response to price; a selected bibliography, item 44.

Schoenfeld, W. A. Some economic aspects of the marketing of milk and cream in New England. U. S. Dept. Agr. Circ. 16, 74pp., charts. Washington, D. C., 1927.

The producer and milk prices (retail delivered milk and store sales, relation of retail prices to consumption, influence of producer prices upon milk supply, relation of basic economic factors to milk-price policies), pp.29-50. The last three sections of this part of this circular were prepared by M. J. B. Ezekiel.

Smith, B. B. The adjustment of agricultural production to demand. Jour. Farm Econ. 8(2): 145-165. Apr. 1926.

"The general problem is stated, and then discussed with especial reference to the cotton situation." -Wells, O. V. Farmers' response to price; a selected bibliography, item 74.

Smith, B. B. Factors affecting the price of cotton. U. S. Dept. Agr., Tech. Bull. 50, 75pp., charts. Washington, D. C., 1928.

Literature cited, pp.72-74.

Effect of size of supply on price and value of crop, pp.3-7; Factors affecting changes in cotton acreage, pp.7-9; Factors influencing monthly prices of cotton (influence of supply upon prices, influence of demand upon prices, influence of purchasing power of consumers, relative importance of supply and demand factors in cotton price fluctuations), pp.9-18; Statistical analysis of factors influencing cotton prices, pp.18-56.

Smith, B. B. Forecasting the acreage of cotton. Amer. Statis. Assoc. Jour. 20(n.s. 149): 31-47. Mar. 1925.

Thibodeaux, B. H., and Wells, O. V. Use of outlook information farm-business planning in the cotton belt. A preliminary report. 47pp., mimeogr. Washington, D. C., U. S. Dept. of Agriculture, Bureau of Agricultural Economics, November 1932. 1.9 Ec762U

"A generalized explanation of the relation between prices and the future acreage of southern crops, with especial reference to cotton, is given on pp.9-10." -Wells, O. V. Farmers' response to price; a selected bibliography, item 76.

U. S. Dept. of agriculture, Bureau of agricultural economics. The agricultural outlook. U. S. Dept. Agr. Misc. Circ. 23, 38, 65, and 101, and Misc. Pub. 19, 44, 73, 108, 156, 182, and 215. Washington, D. C., 1924-1934.

"The supply forecasts in many of the commodity statements regularly included in the Outlook are usually derived in part from studies of the effects of price upon acreage or production. The Outlook is designed to help in the adjustment of agricultural production." - Wells, O. V. Farmers' response to price; a selected bibliography, item 67.

U. S. Dept. of agriculture, Bureau of agricultural economics. Discussion of price forecasting at a conference with state representatives. Annual outlook meeting of the Bureau of agricultural economics, January 26, 1928. 14pp., 15 charts, mimeogr. Washington, D. C., 1928. 1.9 Ec7AgrD

Contents: Can prices be forecasted? abstract of discussion by O. C. Stine, pp.1-4; Price forecasting, abstract of discussion by M. J. B. Ezekiel, pp.5-8; Factors affecting the price of corn, abstract of discussion by C. M. Purves, p.9; Price forecasting, abstract of discussion by L. H. Bean, pp.10-14.

U. S. Dept. of agriculture, Bureau of agricultural economics. Economic situation of hog producers. Letter from the Secretary of agriculture transmitting in response to Senate resolution No. 281, a report pertaining to the hog situation and the probable effects of the proposed export debenture, equalization fee, and domestic allotment plans for farm relief, on the economic position of hog producers. U. S. 72d Cong., 2d sess., Senate Doc. 184, 87pp. Washington, U. S. Govt. Print. Off., 1933. 1 Ec7Ec

For farmers' response to price see especially pp.29-36, 47-50, 53-54.

U. S. Dept. of agriculture, Bureau of agricultural economics. The world wheat outlook, 1930 and Facts that farmers should consider U. S. Dept. Agr., Misc. Pub. 95, 40pp., charts. Washington, D. C., 1930.

"See pp.17-29 for a non-technical discussion of changes in wheat acreage and production." -Wells, O. V. Farmers' response to price; a selected bibliography, item 22.

U. S. Dept. of agriculture, Bureau of animal industry. Conditions affecting the price of hogs. U. S. Dept. Agr., Bur. Animal Indus. Repts. 6th & 7th, 1889 and 1890, pp.84-92. I An5

The following is quoted from p.89:

"From these facts we may conclude that during the eighteen years covered by the tables and charts the following general rules appear to bear upon this question: (1) The price of hogs increased with the price of corn without regard to the amount of hog product placed upon the market. (2) After an advance in the prices of corn and hogs for a series of years the price of corn dropped one year before the decline came in the price of hogs. (3) The fluctuations in the quantity of hog product per capita of population which followed an advance or decline in the price of corn after having moved in the opposite direction did not usually occur until a year had intervened..."

Following the analysis of factors affecting prices of hogs, factors affecting the price of corn are considered.

"The price of corn is therefore governed primarily by the law of supply and demand, but it may also be influenced by the financial condition of the country, the purchasing power of money, and the relative supply of other cereals, and perhaps by other conditions."

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